

FIG. 1a

Sequence #1: AGCGTA

Primer 3016 Da	Extension Products	Mass (Da)
—	agcgta	4878.2
—	agcgt	4565.0
—	agcg	4260.8**
—	agc	3931.6
—	ag	3642.4*
—	a	3313.2

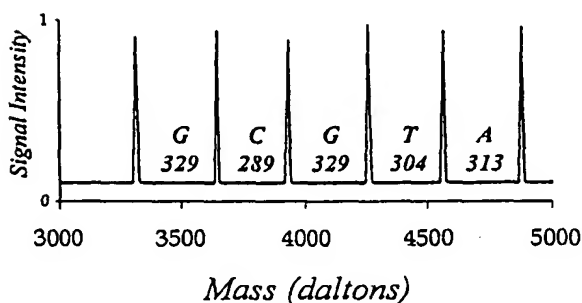


FIG. 1b

Sequence #2: GATCCT

Primer 3016 Da	Extension Products	Mass (Da)
—	gagcct	4854.2
—	gagcc	4550.0
—	gagc	4260.8**
—	gag	3971.6
—	ga	3642.4*
—	g	3329.2

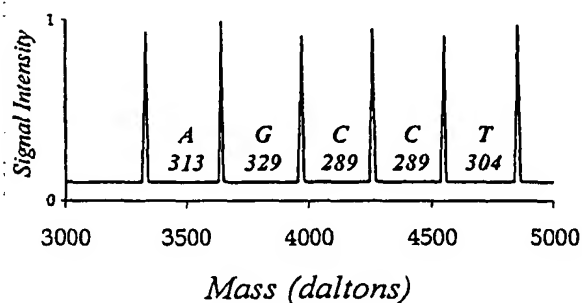


FIG. 1c

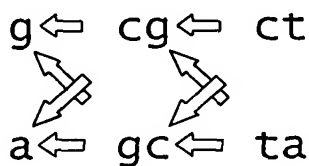
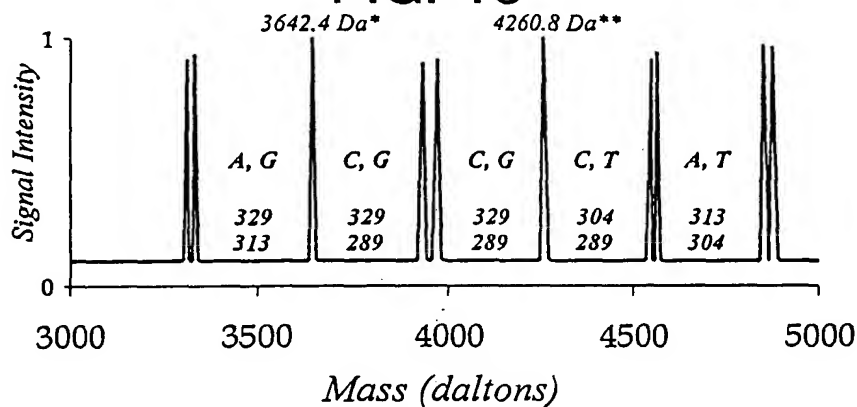


FIG. 1d

gcgct
GCGTA
 ggcct
 ggcta
 acgct
 acgta
AGCCT
 agcta

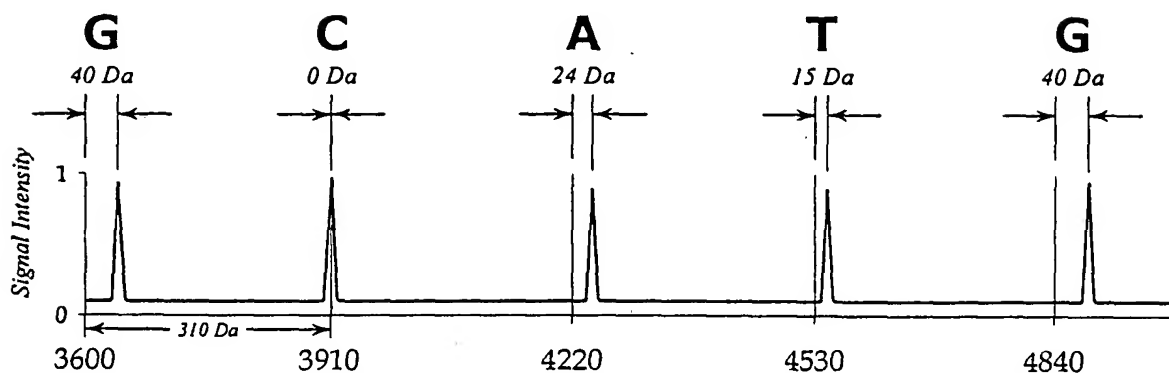
FIG. 1e

Nucleotide Mass (Da)

ddN 310
 ddC 273
 ddT 288
 ddA 297
 ddG 313

Sequence #1: GCATG

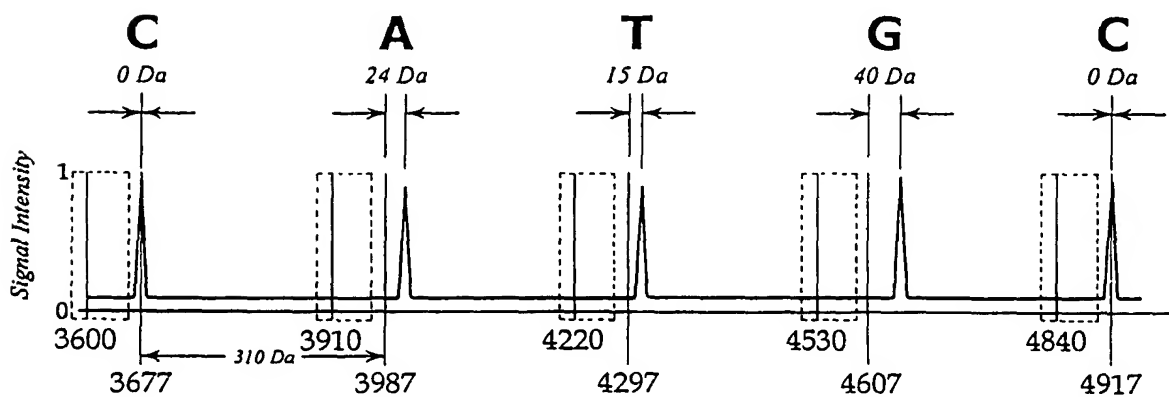
Primer #1	Extension	Mass (Da)
3327 Da	Products	
—	nnnng	4880
—	nnnt	4545
—	nna	4244
—	nc	3910
—	g	3640



Mass (daltons) FIG. 2a

Sequence #2: CATGC

Primer #2	Extension	Mass (Da)
3404 Da	Products	
—	nnnnc	4917
—	nnng	4647
—	nnt	4312
—	na	4011
—	c	3677



Mass (daltons) FIG. 2b

Sequence #1: GCATA

Primer #1 3327 Da	Extension Products	Mass (Da)
————	nnnna	4864
————	nnnt	4545
————	nna	4244
————	nc	3910
————	g	3640

Sequence #3: CATGC

Primer #3 3404 Da	Extension Products	Mass (Da)
————	nnnnc	4917
————	nnng	4647
————	nnt	4312
————	na	4011
————	c	3677

Sequence #2: TCAGG

Primer #2 3481 Da	Extension Products	Mass (Da)
————	nnnng	5034
————	nnng	4724
————	nna	4398
————	nc	4064
————	t	3769

Sequence #4: AACTC

Primer #4 3558 Da	Extension Products	Mass (Da)
————	nnnnc	5071
————	nnnt	4776
————	nnc	4451
————	na	4165
————	a	3855

Sequence

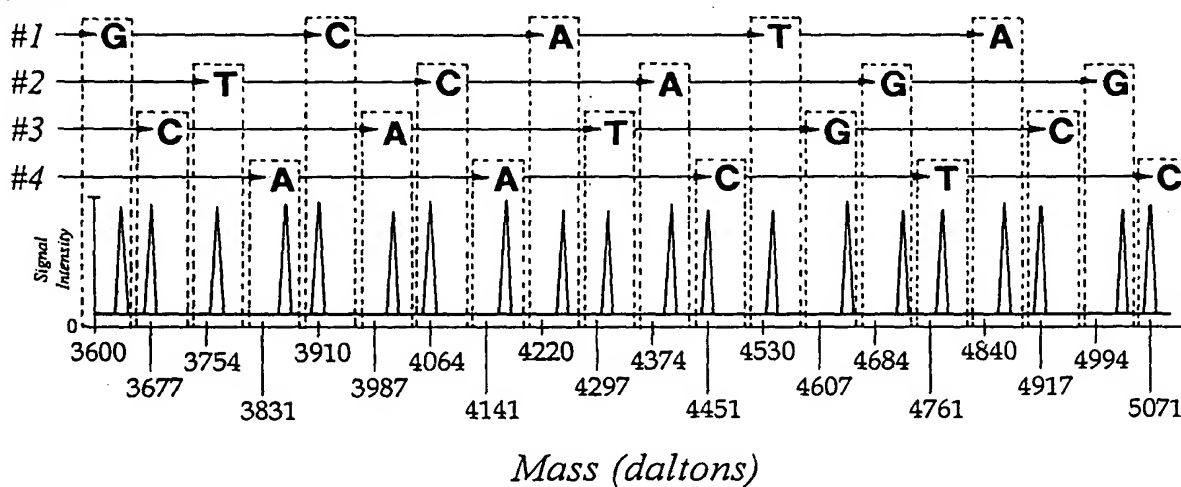


FIG. 3

FIG. 4a

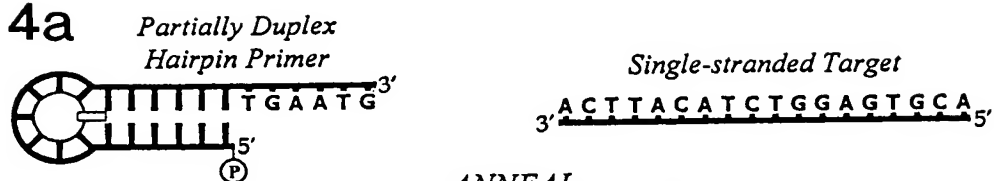


FIG. 4b

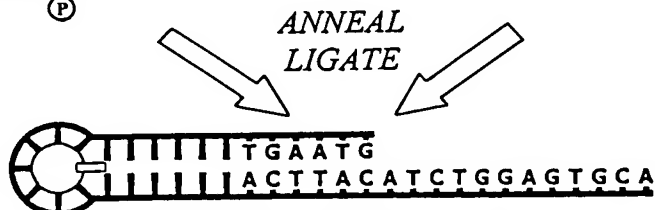


FIG. 4c

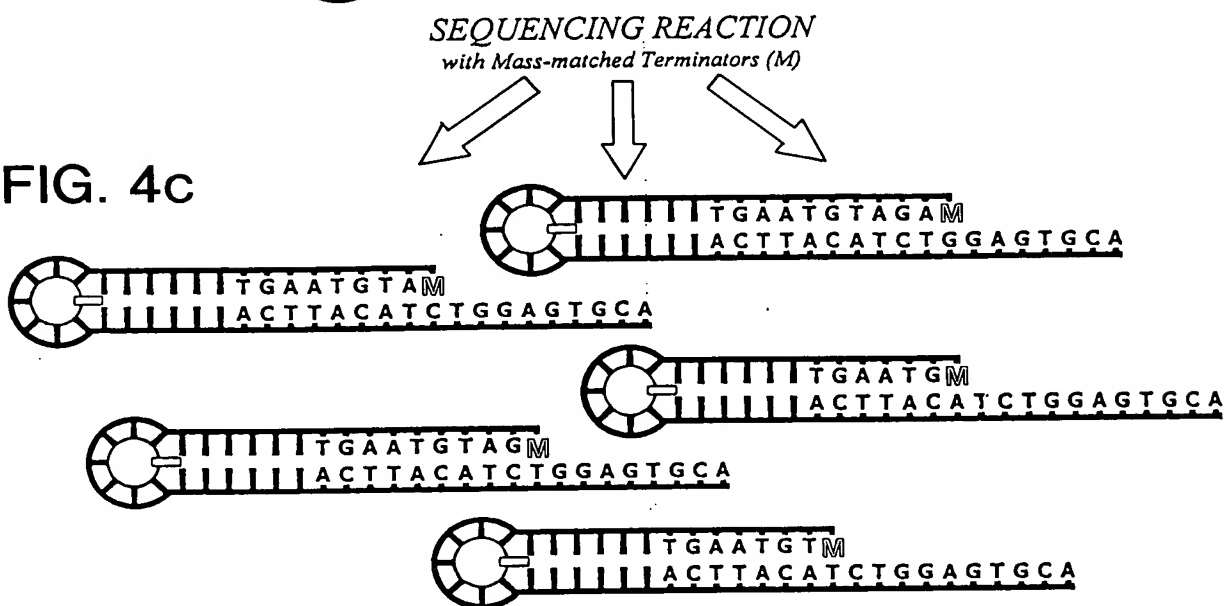
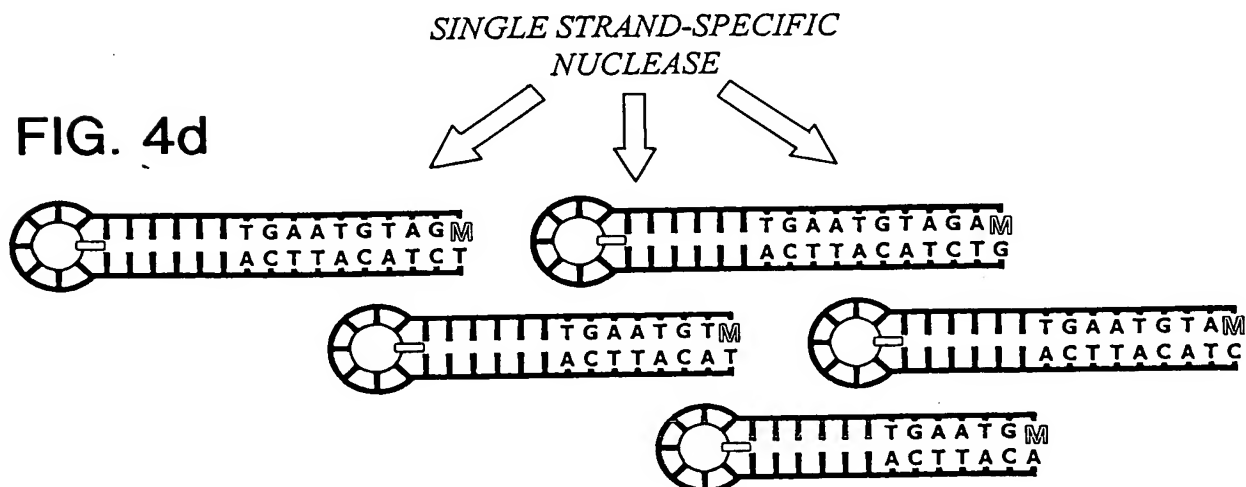


FIG. 4d








<i>Reaction Products</i>	<i>Mass (Da)</i>
	12868.6
	12227.2
	11594.8
	10992.4
	10384.0

FIG. 5a

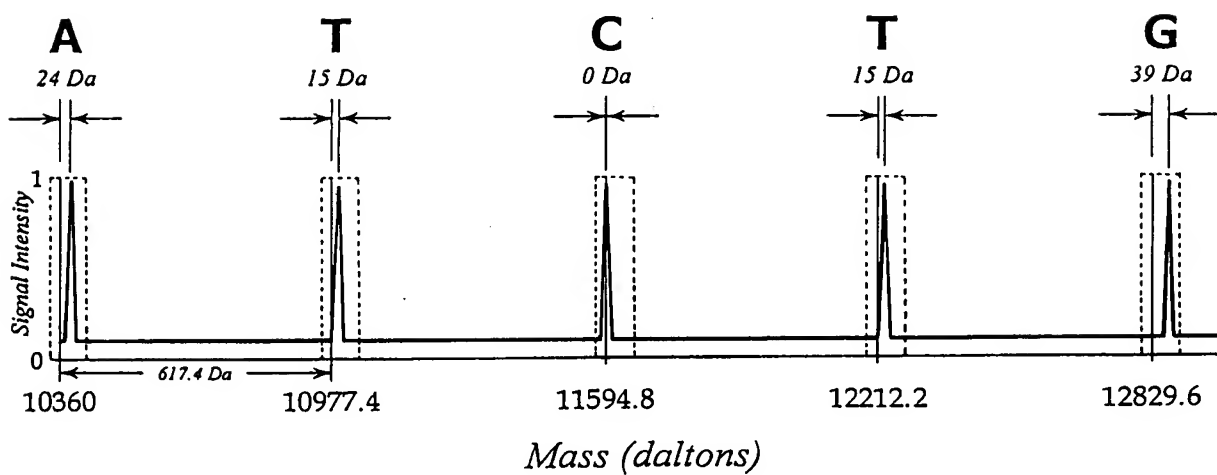


FIG. 5b

Variant #1: AACTGCAT			Variant #2: AACTTCAT			Variant #3: AAGTGCAT		
Primer	Extension Products	Mass (Da)	Primer	Extension Products	Mass (Da)	Primer	Extension Products	Mass (Da)
3616 Da	aactgcat	6054	3616 Da	aactccat	6029*	3616 Da	aagtgcac	6094**
	aactgca	5750		aactcca	5725*		aagtgca	5790**
	aactgc	5437		aactcc	5412*		aagtgc	5477**
	aactg	5148		aactc	5123*		aagtg	5188**
	aact	4819		aact	4819		aagt	4859**
	aac	4515		aac	4515		aag	4555**
	aa	4226		aa	4226		aa	4226
	a	3913		a	3913		a	3913

FIG. 6a

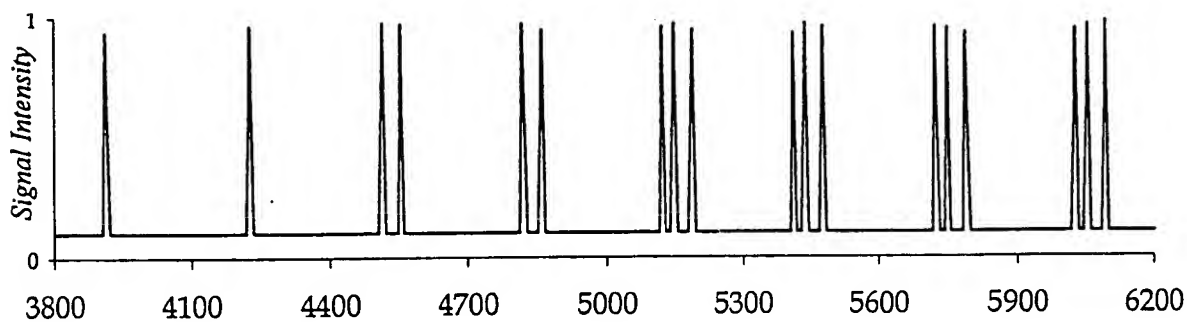


FIG. 6b Mass (daltons)

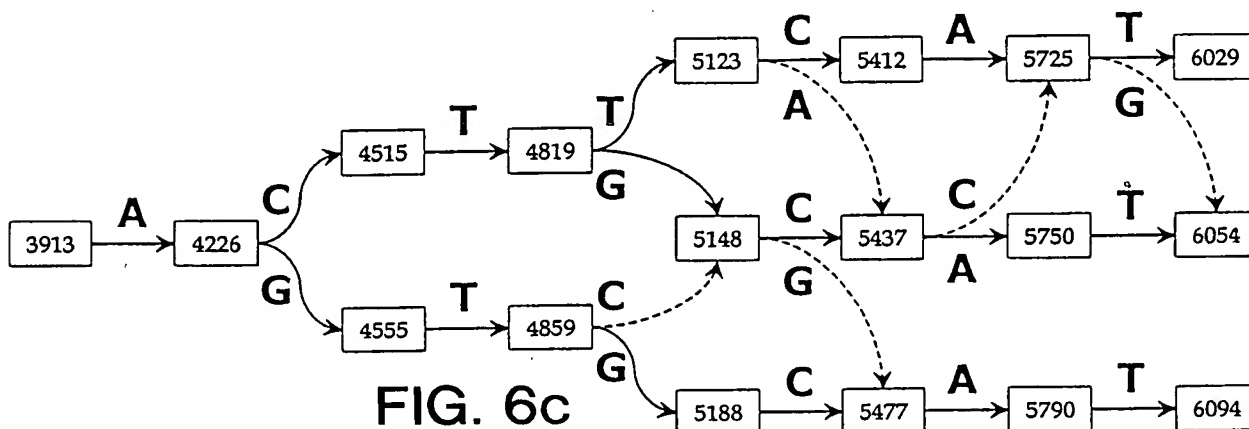


FIG. 6c

ACTGCAT actgccg actgcct actggat acttaat acttacg acttact
 acttcag ACTTCAT agtccat agtcccg agtcct agtcgat AGTGCAT

FIG. 6d

Variant #1: AACTGCAT			Variant #2: AACTTCAT			Variant #3: AAGTGCAT		
Primer	Extension	Mass (Da)	Primer	Extension	Mass (Da)	Primer	Extension	Mass (Da)
3527 Da	Products		3527 Da	Products		3527 Da	Products	
nnnnnnnt	5985		nnnnnnnt	5985		nnnnnnnt	5985	
nnnnnna	5684		nnnnnna	5684		nnnnnna	5684	
nnnnnnc	5350		nnnnnnc	5350		nnnnnnc	5350	
nnnnng	5080		nnnnnt	5055*		nnnnng	5080	
nnnt	4745		nnnt	4745		nnnt	4745	
nnc	4420		nnc	4420		nng	4460**	
na	4134		na	4134		na	4134	
a	3824		a	3824		a	3824	

FIG. 7a

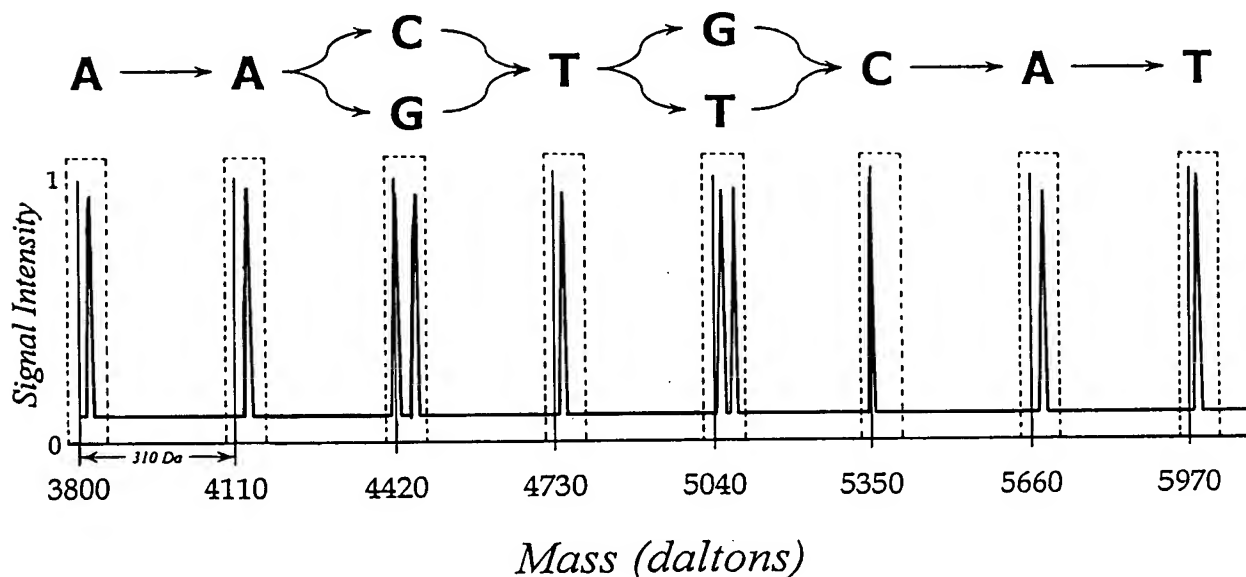


FIG. 7b

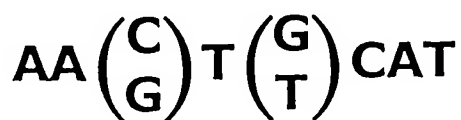
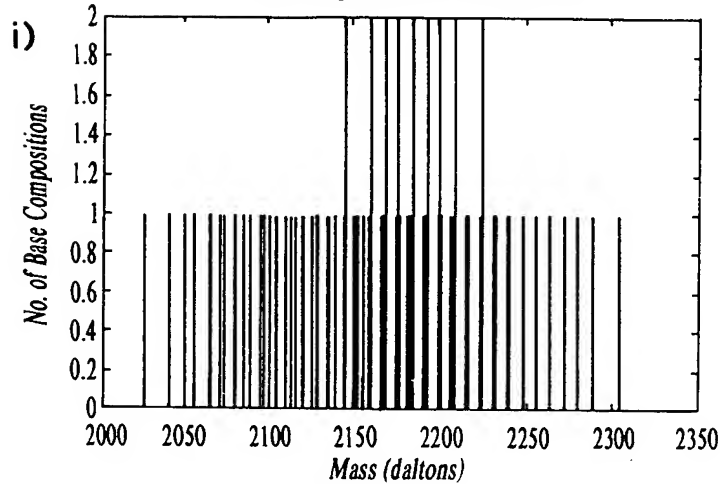


FIG. 7c

AACTGCAT
 AACTTCAT
 AAGTGCAT
 aagttcat

FIG. 7d

Base composition density distributions for
7-mers using different nucleotide sets.



C = 289.2

T = 304.2

A = 313.2

G = 329.2

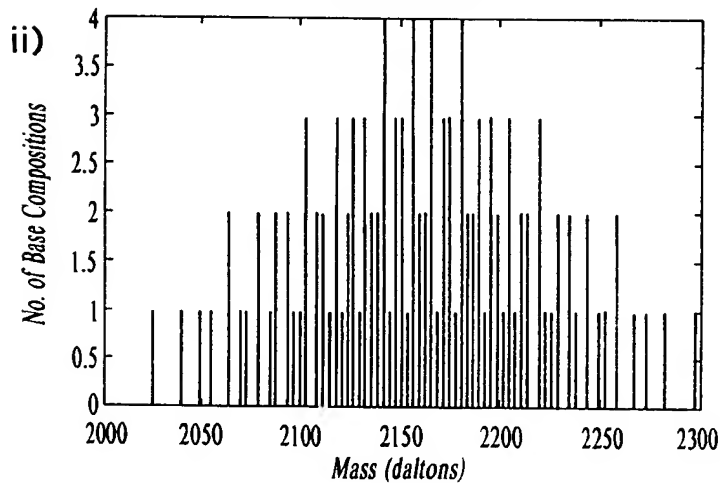
Naturally Occurring Bases

Peaks can be closer than one dalton

Total No. of different base compositions = 120

Actual number of represented masses = 110

Avg. No. of compositions per mass value = 1.091



C = 289.2

T = 304.2

A = 313.2

G = 328.2

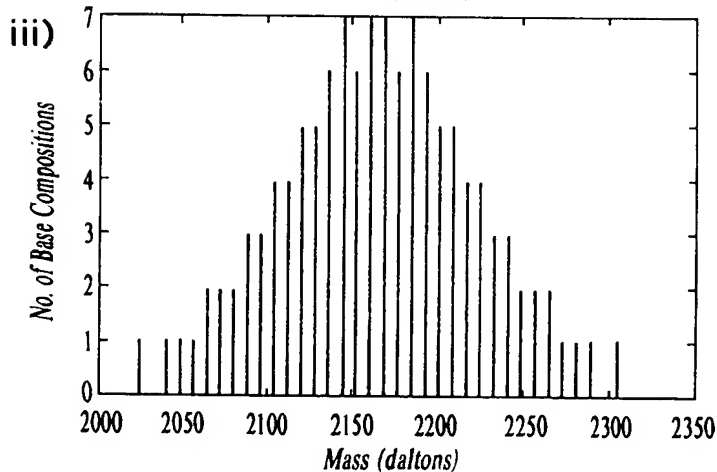
Substitution with 7-deaza-dG

Minimum peak separation = 3 daltons

Number of allowed mass values = 92

Actual number of represented masses = 64

Avg. No. of compositions per mass value = 1.875



C = 289.2

T = 305.2

A = 313.2

G = 329.2

Substitution with deuterio-dT

Minimum peak separation = 8 daltons

Number of allowed mass values = 36

Actual number of represented masses = 34

Avg. No. of compositions per mass value = 3.529

FIG. 8